| Chapter: 9 | Data handling | Sub: MATHS |

Ex. 9.1

Question 1. In a mathematics test the following marks were obtained by 40 students. Arrange these marks in a table using tally marks.

8, 1, 3, 7, 6, 5, 4, 4, 2, 4, 9, 5, 3, 7, 1, 6, 5, 2, 7, 7, 3, 8, 4, 2, 8, 9, 5, 8, 6, 7, 4, 5, 6, 9, 6, 4, 4, 6, 6

(a) Find how many students obtained marks equal to or more than 7?

(b) How many students obtained marks below 4?

Answer:

Marks	Tally Marks	No. of students
1.	||	2
2.	|||	3
3.	|||	3
4.	ⅢⅡ ||	7
5.	ⅢⅡ |	6
6.	ⅢⅡ ||	7
7.	ⅢⅡ	5

(a) Twelve students

(b) Eight students

Question 2. Following is the choice of sweets of 30 students of Class VI.

Ladoo, Barfi, Ladoo, jalebi, Ladoo, Rashulla, Jalebi, Ladoo, Barfi, Rasgulla, Ladoo, Jalebi, Jalebi, Rashulla, Ladoo, Rasgulla, Jalebi, Ladoo, Rasgulla, Ladoo, Ladoo, Barfi, Rasgulla, Rasgulla, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo

(a) Arrange the names of sweets in a table using tally marks.
(b) Which sweet is preferred by most of the students?

Answer:

Sweets	Tally Marks	No. of students
ladoo	𝍸𝍸𝍷	11
Barfi	𝍷	3
Jalebi	𝍸𝍷	7
	𝍸𝍷𝍷	9

(b) Ladoo. Because 11 students prefer to eat.

Question 3. Catherine threw a dice 40 times and noted the number appearing each time as shown below:

1, 3, 5, 6, 6, 3, 5, 4, 1, 6, 2, 5, 3, 4, 6, 1, 5, 5, 6, 1, 1, 2, 2, 3, 5, 2, 4, 5, 5, 6, 5, 1, 6, 2, 3, 5, 2, 4, 1, 5

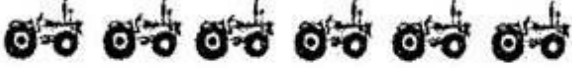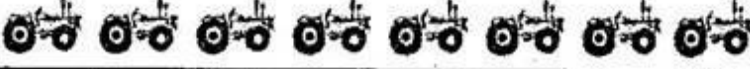Make a table and enter the data using tally marks. Find the number that appeared.
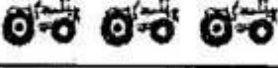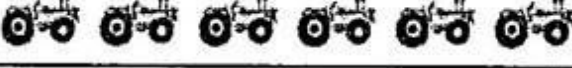
(a) The minimum number of times.
(b) The maximum number of times.
(c) Find those numbers that appear an equal number of times.

Answer:

Numbers	Tally Marks	How many times?
1.	𝍸𝍷	7
2.	𝍸𝍷	6
3.	𝍸	5
4.	𝍷	4
5.	𝍸𝍸𝍷	11
	𝍸𝍷	

(a) The minimum number of times =4
(b) The maximum number of times = 5
(c) 1 and 6

Question 4. Following pictograph shows the number of tractors in five villages:

Villages	No. of tractors – 1 tractor
Village A	
Village B	
Village C	
Village D	
Village E	

Observe the pictograph and answer the following questions:

(i) Which village has the minimum number of tractors?

(ii) Which village has the maximum number of tractors?

(iii) How many more tractors does village C have as compared to village B.

(iv) What is the total number of tractors in all the five villages?

Answer: (i) Village D

(ii) Village C

(iii) 3

(iv) 28

Question 5. The number of girl students in each class of a co-educational middle school is depicted by the pictograph.

Classes	Number of girl students – 4 Girls
I	
II	

III	
IV	
V	
VI	
VII	
VIII	

Observe this pictograph and answer the following questions:

(a) Which class has the minimum number of girl students?

(b) Is the number of girls in class VI less than the number of girls in class V?

(c) How many girls are there in class VII?
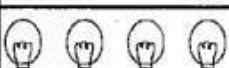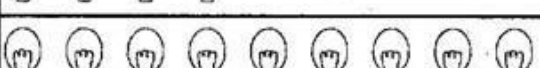
Answer:(a) Class VIII

(b) No

(c) 3 x 4 = 12 girls

Question 6. The sale of electric bulbs on different days of a week is shown below:

Days	Number of electric bulbs	— 2 Bulbs
Monday		
Tuesday		

Wednesday	🔆 🔆 🔆 🔆
Thursday	🔆 🔆 🔆 🔆 🔆
Friday	🔆 🔆 🔆 🔆 🔆 🔆 🔆
Saturday	🔆 🔆 🔆 🔆
Sunday	🔆 🔆 🔆 🔆 🔆 🔆 🔆 🔆 🔆

What can be concluded from the above pictograph?

Answer: (a) Number of bulbs sold on Monday are 12. Similarly, number of bulbs sold on other days can be found.

(b) Maximum number of bulbs were sold on Sunday.

(c) Same number of bulbs were sold on Wednesday and Saturday.

(d) Then minimum number of bulbs were sold on Wednesday and Saturday.

(e) The total number of bulbs sold in the given week were 86.

Question 7. In a village six fruit merchants sold the following number of fruit baskets in a particular season:

Name of fruit merchants	Number of fruit baskets 🧺 – 100 Fruit baskets
Rahim	🧺 🧺 🧺 🧺
Lakhanpal	🧺 🧺 🧺 🧺 🧺 🧺
Anwar	🧺 🧺 🧺 🧺 🧺 🧺 🧺
Martin	🧺 🧺 🧺 🧺 🧺 🧺 🧺 🧺 🧺 🧺
Ranjit Singh	🧺 🧺 🧺 🧺 🧺 🧺 🧺 🧺
Joseph	🧺 🧺 🧺 🧺 🧺

Observe this pictograph and answer the following questions:

(a) Which merchant sold the maximum number of baskets?

(b) How many fruit baskets were sold by Anwar?

(c) The merchants who have sold 600 or more number of baskets are planning to buy a godown for the next season. Can you name them?

Answer: (a) Martin

(b) 7 x 100 = 700 fruit basket

(c) Anwar, Martin, Ranjit Singh

Ex. 9.2

Question 1. Total number of animals in five villages are as follows:

Village A: 80

Village B: 120

Village C: 90

Village D: 40

Village E: 60

Prepare a pictograph of these animals using one symbol $\otimes$ to represent 10 animals and answer the following questions:
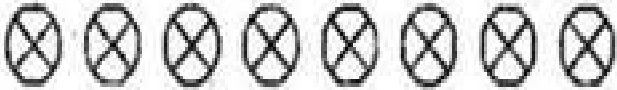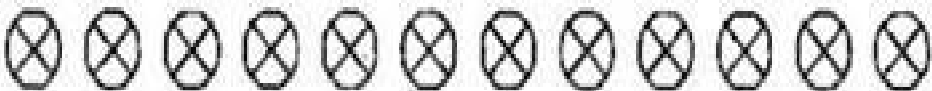
(a) How many symbols represent animals of village E?

(b) Which village has the maximum number of animals?

(c) Which village has more animals: village A or village C?

(a)

⊗ = 10 animals

Village A	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗	80
Village B	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗	120
Village C	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗	90
Village D	⊗ ⊗ ⊗ ⊗	40
Village E	⊗ ⊗ ⊗ ⊗ ⊗ ⊗	60

(a) 6

(b) Village B

(c) Village C has more animals than Village A

Question 2. Total number of students of a school in different years is shown in the following table:

Years	Number of students
1996	400
1998	535
2000	472
2002	600
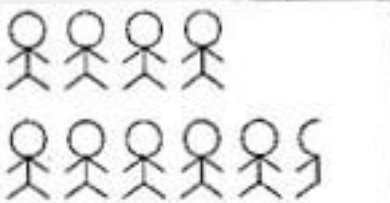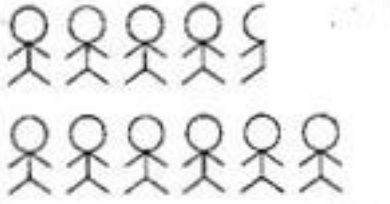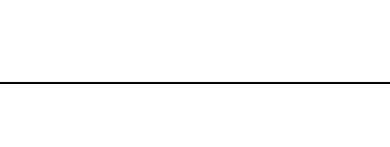
A. Prepare a pictograph of students using one symbol ☺ to represent 100 students and answer the following questions:

(a) How many symbols represent total number of students in the year 2002?

(b) How many symbols represent total number of students for the year 1998?

B. Prepare another pictograph of students using any other symbol each representing 50 students. Which pictograph do you find more informative?

Answer: A.

Years	= 100 students ☺
1996	☺☺☺☺
1998	☺☺☺☺☺☺〈
2000	☺☺☺☺〈
2002	☺☺☺☺☺☺☺
	☺☺☺☺☺☺〈

(a) 6

(b) Five completed and one in-completed.

B.

Years	$\triangle$ = 50 students
1996 1998 2000 2002	$\triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle$ $\triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \angle$ $\triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \angle$ $\triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle$ $\triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \triangle\ \angle$
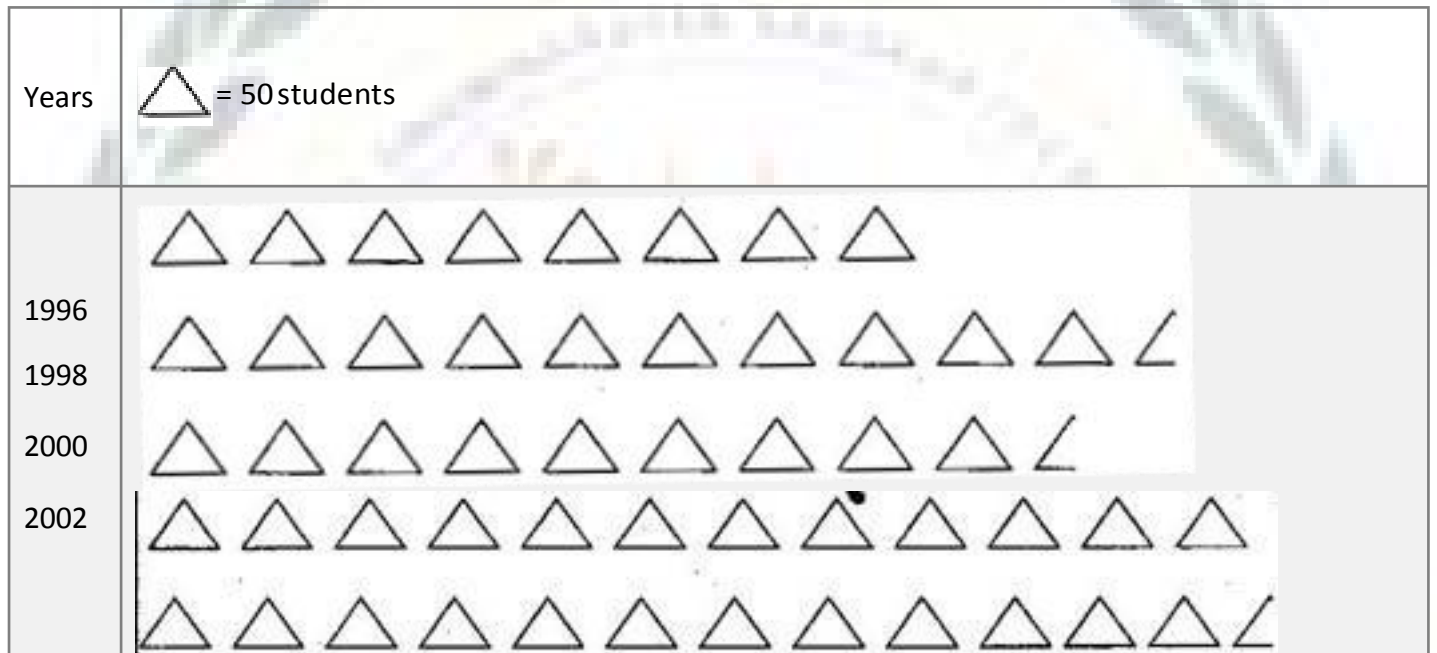
Pictograph A is more informative and appropriate than B.

Question 1. The bar graph given below shows the amount of wheat purchased by government during the year 1998 – 2002.
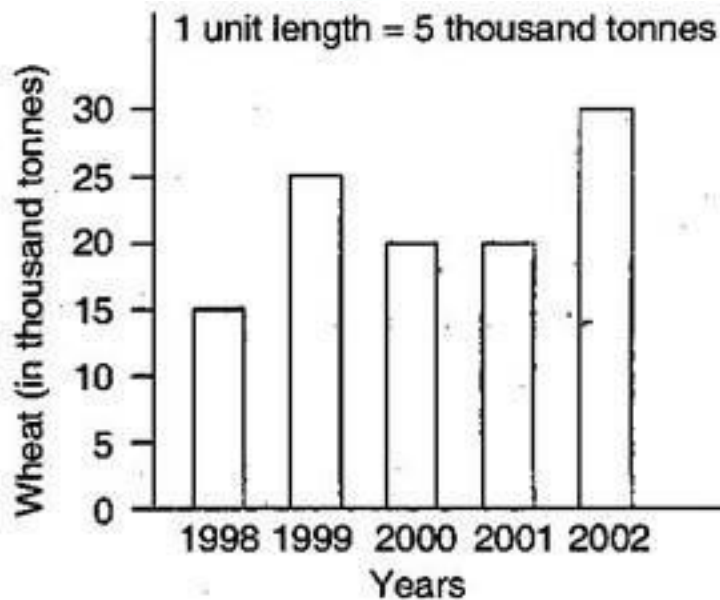
Read the bar graph and write down your observations. (a)In

which year was the wheat production maximum?

(b) In which year was the wheat production minimum?

Answer: (a) In 2002, production of wheat was maximum.

(b) In 1998, production of wheat was minimum.

Question 2. Observe this bar graph which shows the sale of shirts in a readymade shop from Monday to Saturday.

1 unit length = 5 shirts

Now answer the following questions:

(a) What information does the above bar graph give?

(b) What is the scale chosen on the horizontal line representing number of shirts?

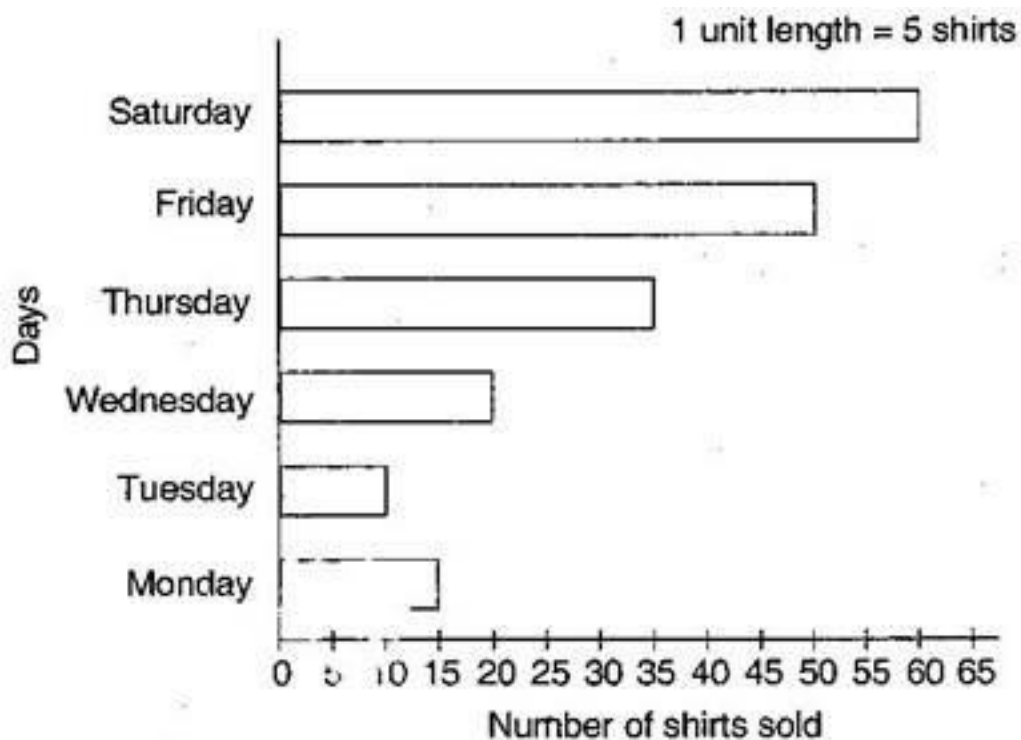(c) On which day were the maximum number of shirts sold? How many shirts were sold on that day?

(d) On which day were the minimum number of shirts sold?

(e) How many shirts were sold on Thursday?

Answer: (a) The bar graph shows the sale of shirt in a readymade shop from Monday to Saturday.
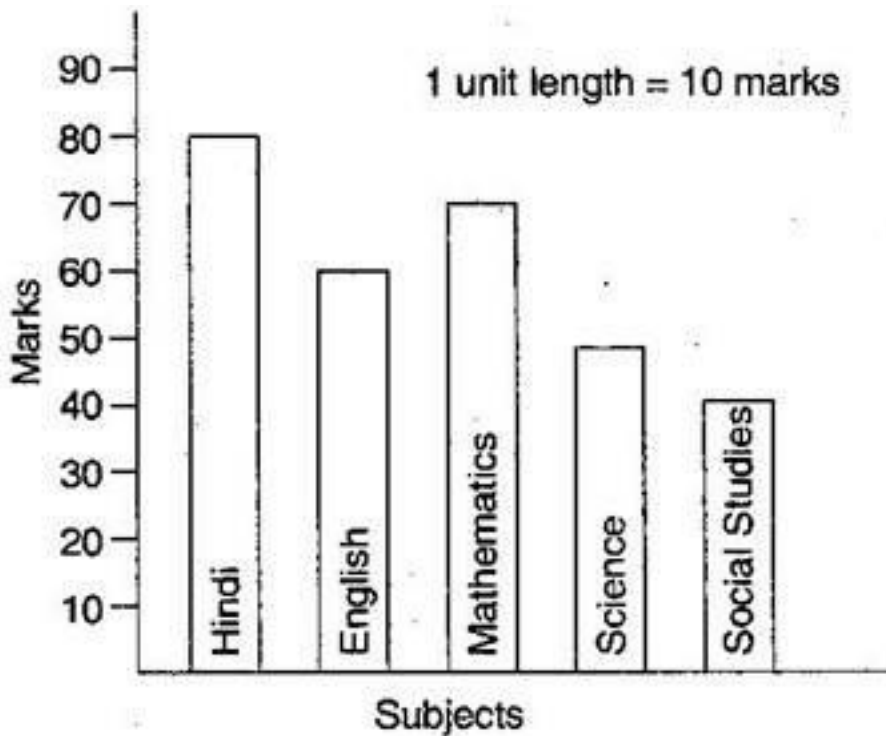
(b) 1 unit = 5 shirts

(c) On Saturday, maximum number of shirts, 60 shirts were sold.

(d) On Tuesday, minimum number of shirts were sold.

(e) On Thursday, 35 shirts were sold.

Question 3. Observe this bar graph which shows the marks obtained by Aziz in half yearly examination in different subjects:

Answer the given questions:

(a) What information is does the bar graph give?

(b) Name the subject in which Aziz scored maximum marks.

(c) Name the subject in which he has scored minimum marks.

(d) State the name of the subjects and marks obtained in each of them

Answer: (a) The bar graph shows the marks obtained by Aziz in half yearly examination in different subjects.

(b) Hindi.

(c) Social Studies.

(d) Hindi 80, English 60, Mathematics 70, Science 50, Social Studies 40.

Ex. 9.4

Question 1. A survey of 120 school students was done to find which activity they prefer to do in their free time:

Preferred activity	Number of students
Playing	45
Reading story books	30
Watching TV	20
Listening to music	10
Painting	15

Draw a bar graph to illustrate the above data taking scale of 1 unit length = 5 students Which activity is preferred by most of the students other than playing?
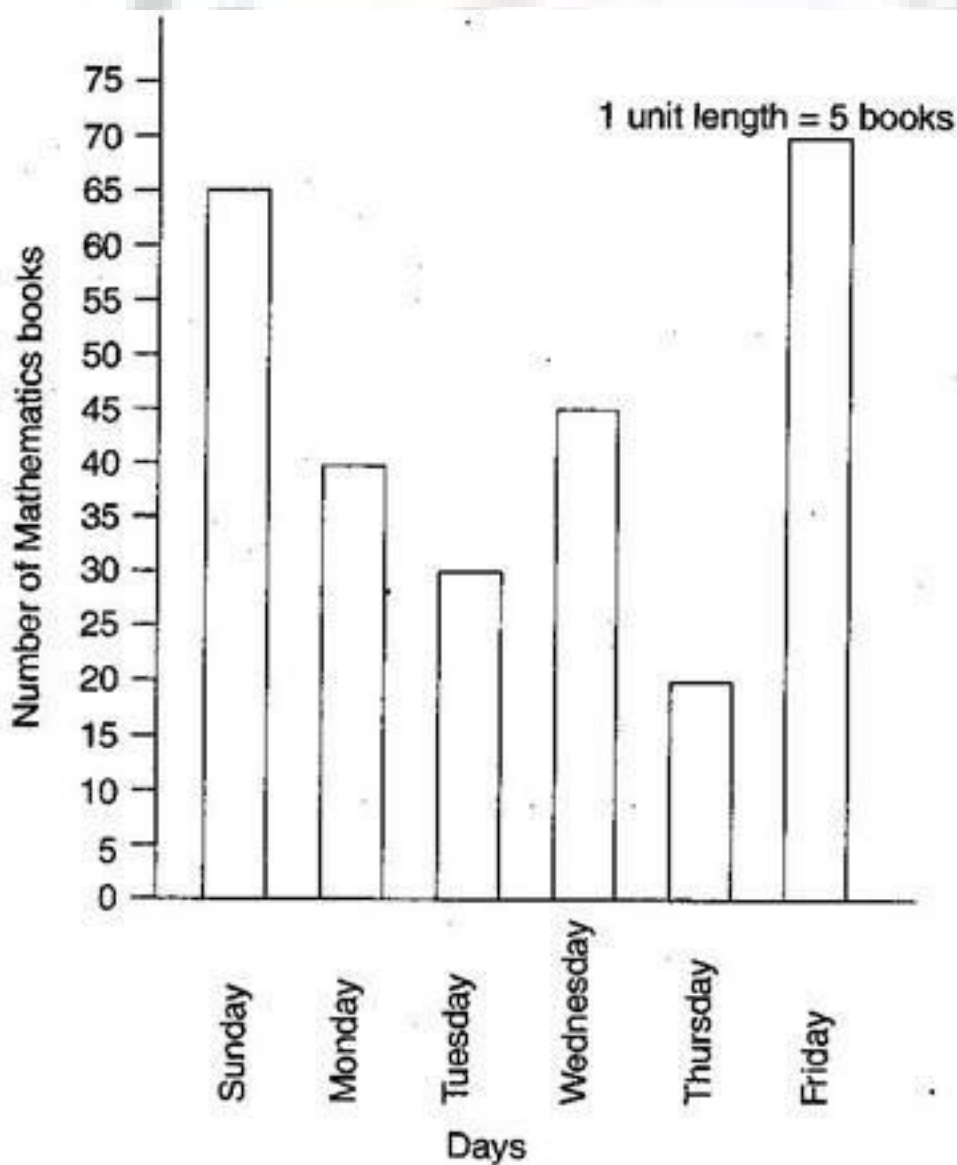
Answer:
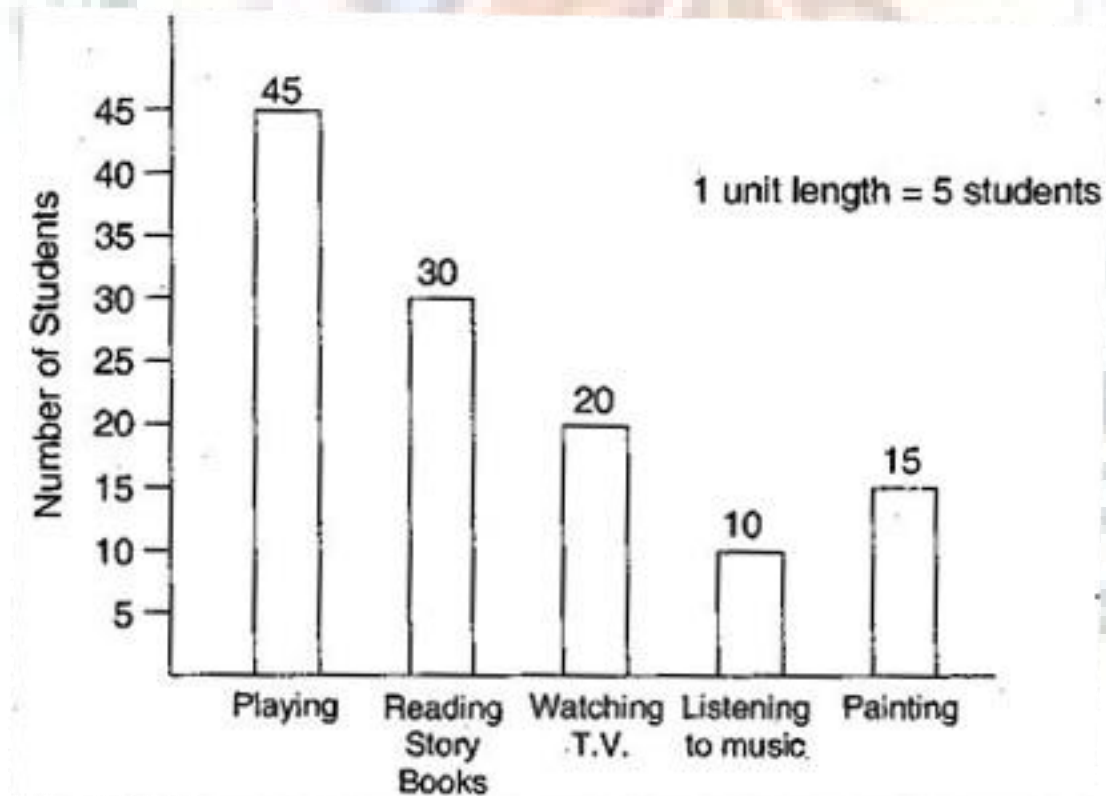
Ans: Reading Story Books is preferred by most of the students other than playing

Question 2. The number of mathematics books sold by a shopkeeper on six consecutive days is shown below:

Days	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
No. of books sold	65	40	30	45	20	70

Draw a bar graph to represent the above information choosing the scale of your choice.


Answer:

Question 3. Following shows the number of bicycles manufactured in a factory during the year 1998 to 2002. Illustrate this data using a bar graph. Choose a scale of your choice.

Years	Number of bicycles manufactured
1998	200
1999	600
2000	900
2001	1100
2002	1200

(a) In which year were the maximum number of bicycles manufactured?

(b) In which year were the minimum number of bicycles manufactured?
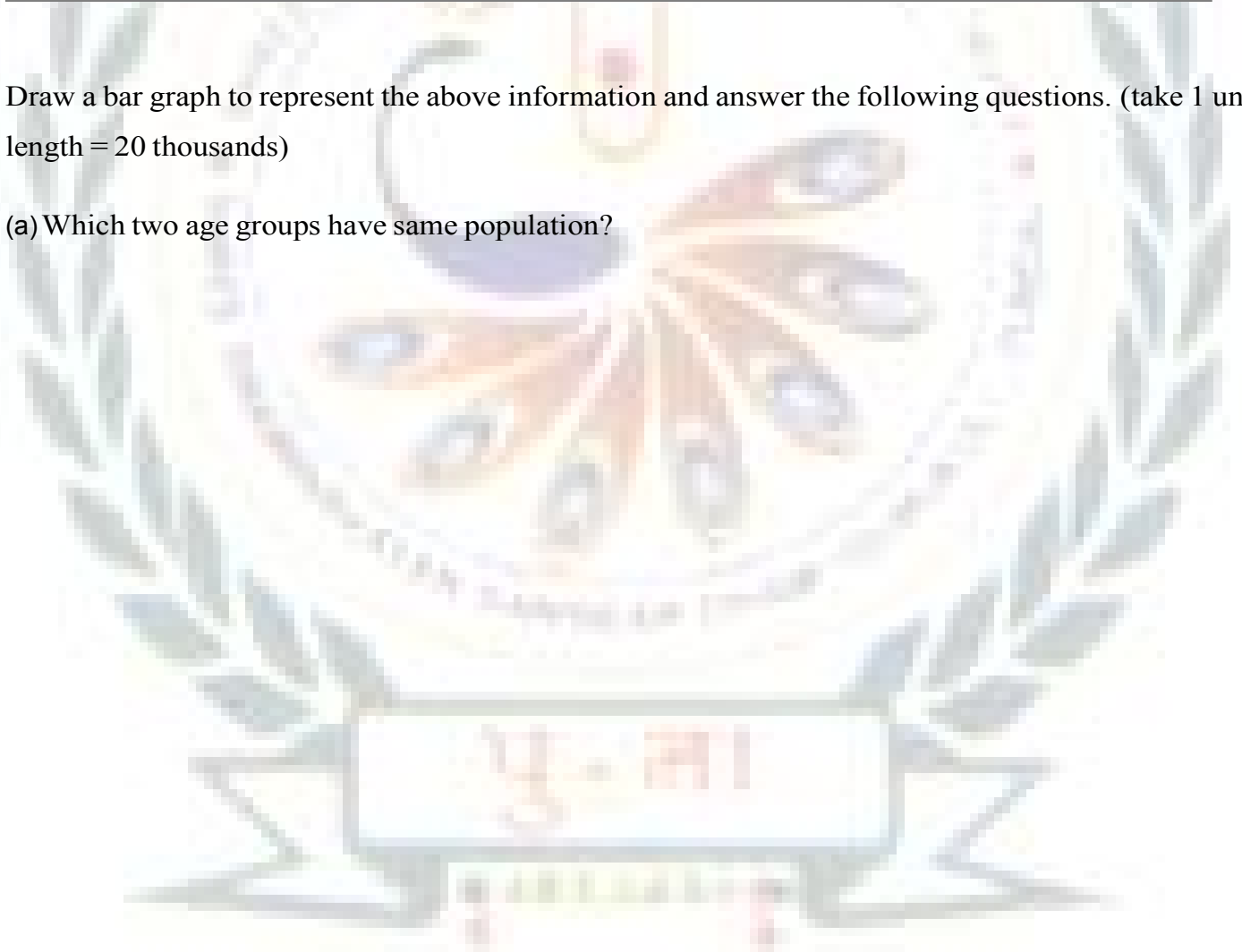
Answer:
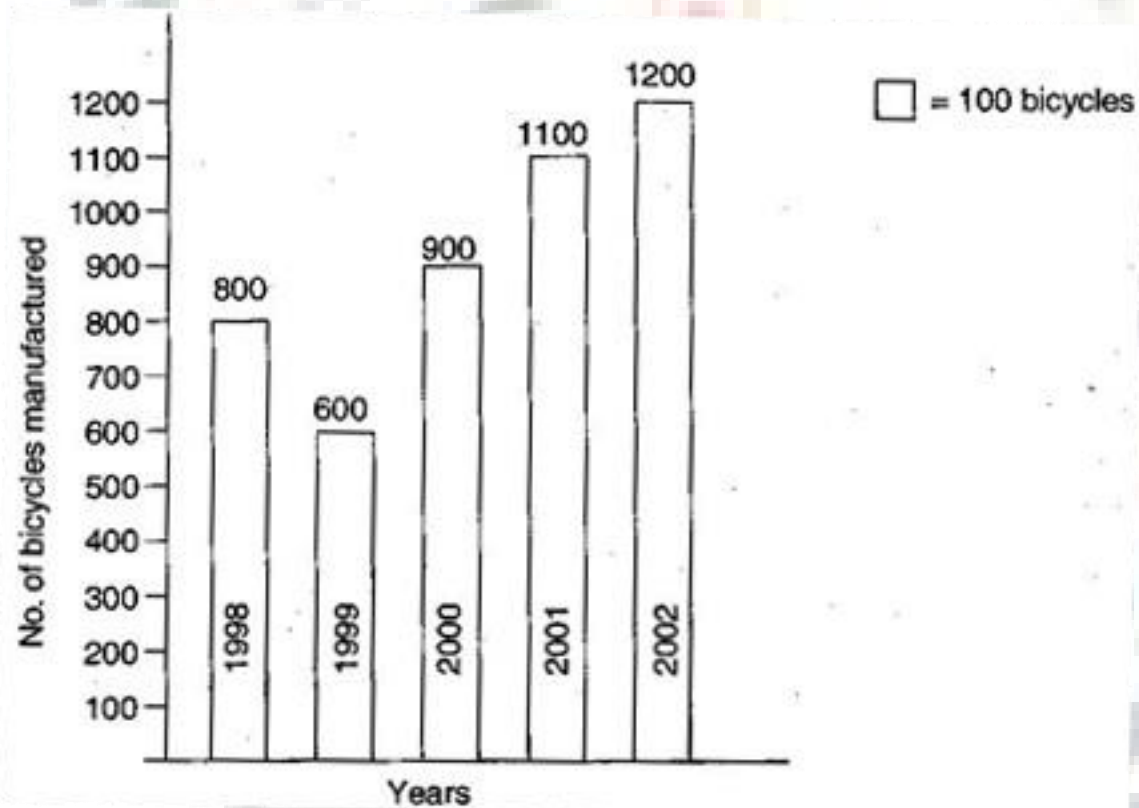
(a) 2002

(b) 1998

Question 4. The Number of persons in various age groups in a town is given in the following table:

| Age Group	Number of persons
1 – 14	2 Lakhs
15 – 29	1 lakh 60 thousands
30 – 44	1 lakh 20 thousands
45 – 59	1 lakh 20 thousands
60 – 74	80 thousands
75 and above	40 thousands

Draw a bar graph to represent the above information and answer the following questions. (take 1 unit length = 20 thousands)

(a) Which two age groups have same population?

(b) All persons in the age group of 60 and above are called senior citizens. How many senior
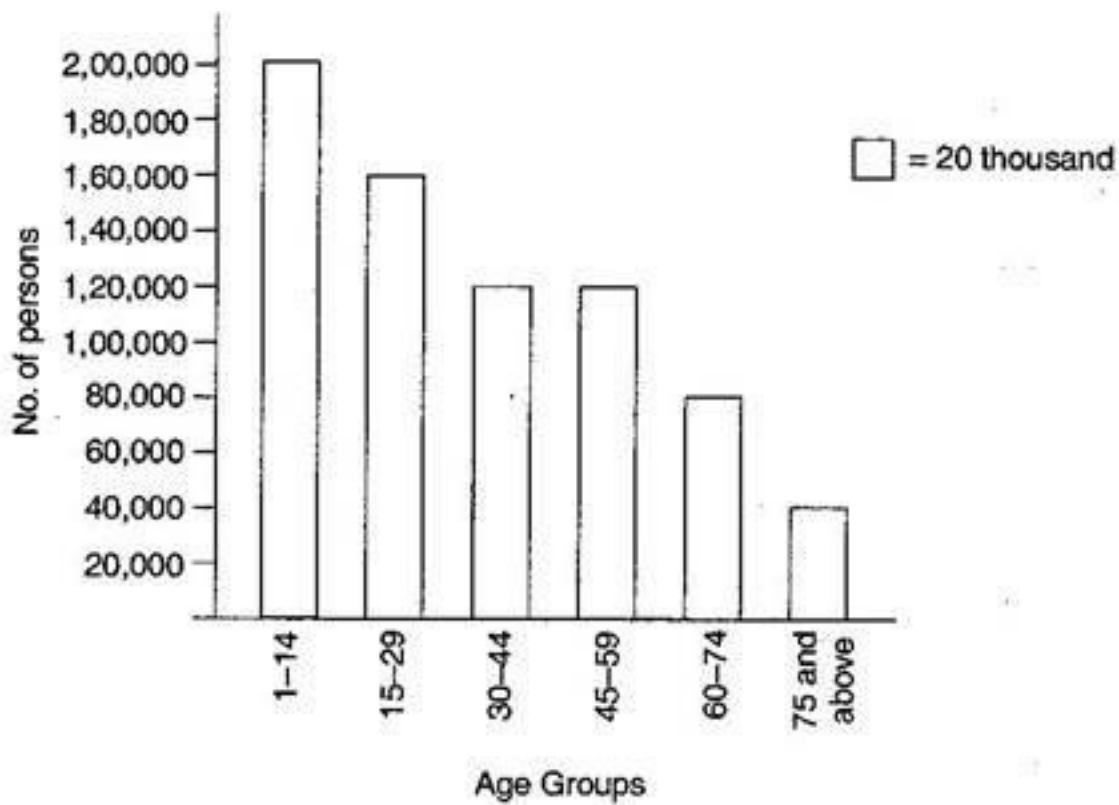
citizens are there in the town? Answer:

(a)Group 30 – 44 and group 45 – 59 (b)

80,000 + 40,000 = 1,20,000